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Re: Hazardous Materials Training Requirements  
Docket No. FAA-2003 -15085

The Air Transport Association of America, Inc. (“ATA”) hereby submits these comments, on behalf of its member air carriers,<sup>1</sup> to the Notice of Proposed Rulemaking (the “NPRM”) issued by the Federal Aviation Administration (“FAA”) on May 8, 2003 (68 FR 24810). ATA appreciates the opportunity to comment on this proposed rule. ATA is the principal trade and service organization of the U.S. scheduled airline industry. Our members account for 95 percent of U.S. passenger and cargo traffic in domestic air transportation and employ more than 500,000 people. Thus, the proposed rule, if finalized, would have a direct and significant effect on ATA member airlines, and for this reason ATA and its members have an abiding interest in the outcome of this rulemaking. Several ATA member carriers have submitted individual comments, and ATA’s comments should be read in conjunction with these carriers’ individual concerns.<sup>2</sup>

Given the gravity of the defects in the NPRM, as discussed below, ATA respectfully requests that the FAA withdraw the current NPRM and reconsider its approach. ATA suggests that the FAA conduct an Aviation Rulemaking Committee (“ARC”) in lieu of addressing hazmat training requirements through traditional notice and comment rulemaking. In such a collaborative setting, all agency and industry stakeholders could work constructively to evaluate what revisions to dangerous goods training would be beneficial. At minimum, the FAA should convene a public hearing to allow the carriers to further explain their serious concerns about the proposals.

ATA and its member carriers would like to work cooperatively with the FAA and other governmental agencies to consider possible improvements in the regulations governing air transportation of hazmat. Since the issuance of the NPRM, the carriers have been puzzled about many aspects of the FAA’s intent and objectives, and for that reason had sought early dialogue or public hearings. Absent that opportunity, the carriers have addressed those uncertainties and contingencies in these formal comments. This lack of clarity, however, underscores the importance of bringing stakeholders together to identify and focus upon the genuine issues.

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<sup>1</sup> Members are: Airborne Express, Alaska Airlines, Aloha Airlines, America West Airlines, American Airlines, Astar Air Cargo (formerly DHL Airways), ATA Airlines, Atlas Air, Continental Airlines, Delta Air Lines, Emery Worldwide, Evergreen International, Federal Express, Hawaiian Airlines, JetBlue Airways, Midwest Airlines, Northwest Airlines, Polar Air Cargo, Southwest Airlines, United Airlines, UPS, and US Airways. Associate members are: Aerovias de Mexico, Air Canada, Air Jamaica, KLM Royal Dutch Airlines, and Mexicana. JetBlue and Midwest Airlines are the only members that do not accept hazmat shipments. All ATA members are Part 121 carriers.

<sup>2</sup> ATA reserves the right to supplement these comments and the accompanying analysis of the economic effects of the proposals on ATA carriers. ATA recognizes that the FAA has already granted a 60-day extension of time. 68 FR 40206 (July 7, 2003). In early July, however, the person long responsible for dangerous goods matters at ATA accepted an early retirement program, which had been offered shortly beforehand in the context of an ongoing reorganization and staff reduction at ATA. ATA has reassigned the responsibility to its Office of General Counsel, but the transition of this and other matters has inevitably slowed the preparation of comments and the development of economic support. ATA appreciates the FAA’s understanding of these circumstances.

## **Executive Summary**

ATA agrees that safety in the transportation of hazardous materials<sup>3</sup> is essential, and supports training rules that are effectively targeted to further this objective. The current proposals, however, miss the mark for many reasons. Among other things, the proposals:

- Are far broader than necessary to address the primary safety objective cited – prevention of another ValuJet-type accident caused by inadequately trained contractors – and would not improve safety.
- Would not achieve their other intended result – identification and interdiction of undeclared or improperly declared hazmat.
- Fail to take account of other pending governmental measures relating to undeclared and improperly declared hazmat -- screening of luggage by the Transportation Security Administration (“TSA”) and upcoming guidance from the Department of Transportation (“DOT”) on what constitutes “constructive knowledge” of potential undeclared hazmat under the Hazardous Materials Regulations (“HMRs”).
- Would improperly direct the expansion of training requirements at carriers, when the FAA could far more effectively reduce undeclared and improperly declared hazmat by leading a governmental effort to educate shippers who offer hazmat for air transportation.
- Would exclude foreign-certificated carriers from their scope, creating further inconsistency in international practices when continued harmonization should be the goal.
- Would impose extraordinary burden and expense on air carriers – far exceeding the \$107.5 million over ten years cited in the NPRM’s flawed cost-benefit analysis -- by requiring them to give extensive training to tens of thousands of additional employees.
- Abandon the concept of training commensurate with an employee’s job function, as reflected in the HMRs and the training content provisions of the International Civil Aviation Organization (“ICAO”) Technical Instructions, which many carriers use as a guide in designing their training courses.
- Fail to recognize the effectiveness of the carriers’ carefully designed, job-specific training programs, and would actually make hazmat training less effective by inundating carrier employees with information irrelevant to their jobs, which they are less likely to retain.
- Would stifle carrier innovation by mandating “one-size-fits-all” training content in broadly-defined employee categories that cover persons with differing, if any, hazmat responsibilities.
- Would require unnecessary new training content for vast numbers of employees at carriers that have elected not to transport hazmat (“will-not-carry” carriers).
- Would require training of a vague and overbroad class of “supervisors,” and impose an unworkable “visual” supervision requirement for new employees and foreign workers in international locations.
- Would impose unworkable and very costly requirements to train employees at repair stations and other contractors with which carriers do business.
- Set an implementation deadline that cannot be achieved.

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<sup>3</sup> The terms “hazardous materials,” “hazmat,” and “dangerous goods” are used interchangeably in these comments.

**I. The Expansion of Training Required by the Proposals is Unnecessary to Achieve Safety and Ill-Conceived to Address Undeclared or Improperly Declared Hazmat Issues**

Before addressing specific provisions of the proposals, the ATA carriers would like to emphasize that the sweeping changes proposed in the NPRM are not justified for five fundamental policy reasons. First, the industry's record for safe handling of hazmat under the HMRs has been one of extraordinary success, and the FAA has approved the training programs by which the carriers have taught their "hazmat employees" to achieve that record. The ValuJet #592 accident, which the FAA cites as justifying many of the changes, did not stem from the lack of appropriate regulations but from failure to follow those that existed. Second, to the extent that the proposals are directed at more general issues of undeclared or improperly declared hazmat, they proceed from a false assumption that such issues will disappear if all carrier employees who might ever touch anything to be loaded on a plane are extensively hazmat-trained. In fact, over-training is counterproductive. Third, the proposals ignore ongoing initiatives by the TSA and RSPA to address related issues. Fourth, the most effective training initiative would be one directed at air transport shippers, and the FAA should lead such a broad governmental effort. Finally, by applying the proposals to domestic carriers only, the FAA would be widening international differences in hazmat policy when further global harmonization of hazmat policies is the best way to promote safety for the flying public.

**A. Current Hazmat Training Has Produced a Safe Air Transportation System That Does Not Need the Drastic Changes Envisioned in the Proposals**

Aside from its efforts to address the causes of the ValuJet accident, the FAA does not cite safety concerns with the existing training regulations as applied to air carriers, whether will-carry or will-not-carry. It elaborates upon the history of the HMRs since they took effect in the 1970's, and speaks generally about a need to update them with the times, but does not set forth a record demonstrating safety inadequacies. 68 FR at 24811-12. Indeed, to this day, the FAA continues to approve will-carry operators' programs under current regulations. The proposals likewise do not set forth a record of inadequacies on the part of will-not-carry carriers, which instruct their employees in how to recognize and refuse hazmat offered to them.

The proposals cite safety concerns relating to the ValuJet accident only in support of the provisions that concern handling of hazmat by Part 145 repair stations. 68 FR at 24812. It is critical to note, however, that regulations that, if followed, could have prevented that accident existed at the time. The repair station was itself subject to the HMRs and therefore required to train its hazmat employees in the handling of oxygen generators. The National Transportation Safety Board ("NTSB") found in its accident investigation that the repair station had not provided any HMR training. NTSB/AAR 97/06 at 65. The NTSB also noted that the FAA and RSPA, in post-accident inspections of other repair stations used by ValuJet, found no other hazmat violations. *Id.* at 90.

The proposals would unnecessarily impose great burden on air carriers that have been handling hazmat issues responsibly, in an effort to redress the misdeeds of the very few contractors that have violated the regulations that already apply to them. Non-compliance such as that brought to light in the ValuJet matter should be addressed through appropriate enforcement in all cases. To the extent any regulatory change would facilitate better awareness between will-not-carry carriers and their contractors, the change should be targeted to the problem and not blanketed over an entire industry.

**B. The Proposals Would Not Improve, and Could Actually Degrade, Safety in Hazmat Handling**

It is important to recognize that a majority of employees at both passenger and cargo carriers have no assigned responsibility for hazmat, and very rarely deal with any situation involving undeclared or improperly declared hazmat. This is why the content of current training is at an awareness level that the carriers consider commensurate with the employees' hazmat responsibilities, or lack of them, within the structure of each carrier's operation. The carriers consider it essential that they retain the ability to exercise that judgment.

The proposals, however, are based on a diametrically opposite approach. They specifically abandon the concept of job-specific training, instead requiring extensive training of everyone, whether or not they have hazmat responsibilities:

... Whether a person were officially assigned to perform a [hazmat] function would be *irrelevant*. This would ensure that the certificate holder identifies and trains each person who could reasonably be foreseen as performing or supervising a TRF [transportation related function], whether or not it is a part of his or her job description.

68 FR 24814 (emphasis added).

As a practical matter, ATA members object to requirements to train on information that lies too far beyond the functional requirements of a specific job. Such excessive training is ineffective, and frankly counter-productive. Excessive training inundates employees with needless information and requirements that are extraneous to their specific responsibilities and – at best – distracts from the central purpose of their job-specific training, diluting the effect of training on material relevant to their function. At worst, it confuses employees about their assigned roles and responsibilities.

In contrast to such overly broad and ineffective course material, effective training should be focused on the job responsibilities of each type of employee. There should be a defined set of clear performance expectations for the personnel who undergo the training, which are identified and reiterated throughout the training experience. The training should focus on the tasks required of the employee and the processes of the job, to make sure that employees know not only *what* to do, but also, *how* to do it. This process also clarifies what tasks the employee should not perform under the safety and process controls implemented by management.

We believe that FAA's proposal has lost sight of these fundamental tenets of effective employee training, and we urge the agency to bear in mind the key features of effective training as it evaluates this rulemaking. There are many resources in the training field that describe effective instruction for employees, who are adult learners. These learning models stress the need for learning to be focused on tasks, highly structured, behaviorally oriented, with measurable performance outcomes.<sup>4</sup> Of particular importance for effective training is the relevance of learning to the user; thus the training needs to be shaped and directed to the actual employee experience, rather than merely addressing the content of regulations or describing procedures that do not involve the learner's assigned responsibilities. Training that dwells on hypothetical situations and on processes disconnected from the employee-student does not result in effective

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<sup>4</sup> Merriam, Sharan B. and Caffarella, Rosemary S., *Learning in Adulthood*, San Francisco, CA: Jossey-Bass, Inc., 1991. See, for example, pp. 23-27.

behavior modification in the workplace.<sup>5</sup> Rather, as research shows, adults have a clear need to know why they are being trained, to be able to draw on experience, and to be trained in material that addresses real-life situations. In other words, “Adults tend to have a life-centered or problem-centered orientation to learning.”<sup>6</sup>

These do not seem to be the elements of training that the FAA proposes to require under this NPRM. ATA members find the prescribed modules, assigned liberally to employees without regard to the actual functional need for the information, to be excessive. The implication of the preamble and the structure of Appendix N is that the FAA has given little consideration to the principles of adult learning. Rather, the agency’s readiness to assign unnecessary training modules to numerous employee groups risks diluting mission-critical knowledge in a flood of superfluous training describing other employees’ responsibilities. For these reasons, individual companies wish to continue with the programs currently established under FAR 121, allowing them to work in concert with the POI to establish effective training programs for the functions identified in FAR 121.433a, and continuing to permit companies the freedom to manage their training programs for other hazmat employees in their organizations.

### **C. The Proposals Overlook Other Significant, Pending Governmental Actions Relating to Both Undeclared and Improperly Declared Hazmat**

#### **1. Undeclared Hazmat**

Most undeclared hazmat is concealed, whether in luggage or a shipped package. Obviously, no amount of training will make concealed hazmat visible to employees who handle its sealed container. Carrier employees generally can only discover concealed hazmat when it leaks or otherwise creates an abnormal situation. At that point, employees know to get the advice of appropriate hazmat specialists.

The NPRM is silent regarding the recent development that is most likely to surface any concealed, undeclared hazmat that passengers may try to bring onto an aircraft – TSA screening of checked and carry-on luggage. The TSA uses advanced technology that magnifies scrutiny beyond the simple visual observation that a carrier ticket agent could make. Extensive training of all ticket counter employees, among others, makes no sense when virtually all baggage-related discoveries will be made by the TSA.

The procedures for handling dangerous goods, once TSA finds them, are currently under active discussion between the TSA and the carriers. It is unclear what role carrier employees will have in handling such goods, or whether that responsibility will be handled completely or partially by a third-party contractor. The FAA should reconsider the need for any additional training for carrier personnel who check in passengers and luggage, and take the ongoing developments in TSA’s role into account in all respects.

#### **2. Improperly Declared Hazmat or Items with Ambiguous Markings**

The proposal also contains little guidance on what to tell employees concerning improperly declared hazmat, or items on which the markings are ambiguous. Proposed Section

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<sup>5</sup> Bragar, Joan L. and Johnson, Kerry A., “Adult Learning Principles,” The Forum Corporation, 1997. See, especially Section II, “Principles of Learning: In Detail.” These five principles include the concept that “Learning is most effective when it addresses issues that are relevant to the learner.”

<sup>6</sup> Demnitz, Cynthia J., “Adult Learning,” p. 323. In Medsker, Karen J. and Holdsworth, Kristina M., Eds., *Models and Strategies for Training Design*, Silver Spring, MD: International Society for Performance Improvement, 2001.

121.135(b)(23)(ii) would require a carrier to ensure that its procedures are sufficient to assist employees in identifying packages that “show signs of containing undeclared hazardous materials.” Proposed Section 121.802(a)(3) provides that each carrier’s training program must “enable the trained person to recognize items that contain, *or may contain*, hazardous materials” regulated under the HMRs (emphasis added). Proposed Appendix N refers to training about “trigger lists,” “passenger check-in lists” and “hidden shipment indicators” in content modules 1 and 2, but gives only vague guidance on such lists. The preamble states:

... The FAA has found that in many cases packages not marked and labeled as hazmat still display indicators that would lead a trained person to suspect the presence of hazmat. For example, terms such as “chemicals,” “lighters,” “paint,” or solvents” on packages or in documents accompanying the package may indicate the possible presence of an undeclared hazmat. Additionally, trigger lists can be used to help alert persons to the possible presence of hazmat in items not properly declared as hazmat. These items include gasoline-powered equipment (chainsaws, generators, or aviation fuel control units) not purged of their hazardous contents, and perishable goods shipped with dry ice, which is a regulated hazmat.

68 FR at 24813.

The industry has established a significant record showing that DOT policy lacks an objective standard of reference for determining the possible presence of undeclared hazmat. This is demonstrated in Docket No. OST-01-10380, including the OST public meeting held on June 19, 2002. For several years, RSPA and the carriers have been discussing what should give a carrier “constructive knowledge” of the possible presence of hazmat under the HMRs. (See, for example, the RSPA General Counsel Formal Interpretation, published June 4, 1998 at 63 FR 30411.) The examples of ambiguous markings cited in the NPRM are among the many issues addressed in the ongoing discussions. ATA believes that RSPA or the Office of the Secretary may soon issue a set of clearer guidelines on that subject, and preferably seek additional public comment. No training revisions should be completed until DOT guidance on that fundamental issue is available.

#### **D. The Proposals Misdirect Additional Training Requirements to Carriers Rather Than Shippers**

Rather than requiring carrier employees to police the compliance of shippers, the most effective way to ensure the proper labeling and shipping of hazmat is to focus on the party that has the initial responsibility under the HMRs – the shipper. Indeed, the shipper is in the best position to prevent ambiguous markings of the type cited in the NPRM.

Several government offices, including the FAA, have regulatory authority over shippers, and the FAA should play the invaluable role of spearheading a consultative process. The FAA itself has the authority to regulate and bring enforcement proceedings against shippers to ensure HMR compliance for cargo to be transported by air. The FAA certainly has the ability to conduct education and outreach programs directed at industries that regularly ship hazmat products by air, and other measures could be applied to reach the general public. The carriers applaud the FAA’s recent efforts to increase outreach to shippers. RSPA has general authority to enforce the HMRs and to regulate shippers, and could participate constructively in a broader education and/or regulatory effort. Any such effort would need to take into account the related security issues regulated by the TSA. The ATA and its members would be pleased to work with the FAA in such an effort to address undeclared and improperly declared hazmat at the source.

## **E. Inapplicability to Foreign Carriers**

By contrast to other requirements for Part 129 foreign carriers' U.S. operations, the FAA does not propose to make such carriers subject to the proposals. Thus, despite the continuing efforts of the UN, ICAO, RSPA and the FAA to standardize international rules and practices concerning hazmat, US carriers would be required to have training programs that are in many respects at odds with the ICAO Technical Instructions. This is a step in the wrong direction on hazmat policy, and an inequitable burden on US carriers at a time when they can least support it.

## **II. The Proposals Would Vastly, and Unnecessarily, Expand Carrier Training Requirements**

The proposals would require carriers, whether or not they accept hazmat, to train tens of thousands of additional employees who do not ordinarily handle such materials. The level of training specified in Appendix N for many employee groups equals that currently required for employees who are directly responsible for hazmat acceptance. To appreciate the enormity of the changes the proposed rules would require, it may be helpful to contrast the proposals with the existing requirements for hazardous materials training.<sup>7</sup>

### **A. Current Dangerous Goods Training Requirements**

#### **1. The DOT Hazardous Material Regulations ("HMRs")**

Following passage of the Hazardous Materials Transportation Act in 1975, the DOT, through the predecessor office to RSPA, issued the HMRs for air, water and surface transportation. As the NPRM notes, these regulations apply to air carriers and repair stations that transport hazmat. 68 FR at 24812.

As a result of subsequent amendment to the Federal Hazardous Materials Transportation Law, the HMRs require "hazmat employers" to train their "hazmat employees" in the safe handling of dangerous goods. A "hazmat employee" is defined to include anyone whose work involves the handling of dangerous goods.<sup>8</sup> Every three years, each "hazmat employee" must receive four categories of training: (1) General awareness/familiarization training concerning regulatory requirements and hazmat recognition, (2) Function-specific training applicable to the employee's job, or alternatively, training in the relevant ICAO Technical Instructions, and (3) Safety Training, including emergency response, exposure protection and accident prevention measures, and (4) Security awareness training.<sup>9</sup> 49 CFR §172.704(a).

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<sup>7</sup> The FAA has made public statements to the effect that it does not believe the proposals would require significant changes in current carrier practice. The carriers do not understand how the FAA reaches that conclusion based on the literal text of the proposals and the concept of a "transportation related function" or "TRF." Moreover, even if the proposals gave some indication that carriers could tailor the required content commensurate with their employees' duties, the requirement for POI approval would still leave the carriers at risk that their programs could be subject to individualized and inconsistent interpretations.

<sup>8</sup> A "hazmat employer" is defined as "a person who uses one or more of its employees in connection with : transporting hazardous materials in commerce; causing hazardous materials to be shipped in commerce; or representing, marking, certifying, selling, offering, manufacturing, reconditioning, testing, repairing or modifying containers, drums or packagings as qualified for use in the transportation of hazardous materials." A "hazmat employee" is defined as an employee "who in the course of employment directly affects hazardous materials transportation safety ... including one who "loads, unloads or handles hazardous materials," "prepares hazardous materials for transportation" or "operates a vehicle used to transport hazardous materials." 49 CFR §171.8.

<sup>9</sup> The requirement for security awareness training is a recent addition, adapting the HMRs to current realities. Docket HM-232, 68 FR 14510 (March 25, 2003)

## **2. FAA Regulations and Advisory Circulars**

Among other things, the FAA is charged with enforcing the HMRs as they apply to Part 121 and 135 air carriers, as well as to Part 145 repair stations. Under 14 CFR §121.135(23), a carrier's manuals for flight, ground operations and management personnel must contain the following provisions to ensure compliance with the HMRs:

Procedures and information to assist personnel to identify packages marked or labeled as containing hazardous materials and, if these materials are to be carried, stored, or handled, procedures and instructions relating to the carriage, storage, or handling of dangerous materials, including the following:

- i. Procedures for determining the proper shipper certification required by 49 CFR subchapter C, proper packaging, marking, labeling, shipping documents, compatibility of materials, and instructions on the loading, storage and handling.
- ii. Notification procedures for reporting hazardous material incidents as required by 49 CFR subchapter C.
- iii. Instructions and procedures for the notification of the pilot in command when there are hazardous materials aboard, as required by 49 CFR subchapter C.

Under 14 CFR §121.401(a)(1), carriers are required to obtain FAA approval of their training programs. The FAA must be satisfied that each training program “insures that each crew member, aircraft dispatcher, flight instructor, and check airman, and each person assigned duties for the carriage and handling of dangerous goods and magnetized materials, is adequately trained to perform his assigned duties.”

Under 14 CFR §121.433a, carriers are prohibited from assigning untrained personnel to handle hazmat. The FAA regulation requires the training to be more frequent than provided for in the HMRs (annually instead of every three years), and provides that the training must include “instructions regarding the proper packaging, marking, labeling, and the documentation of dangerous articles and magnetized materials, as required by 49 CFR and instructions regarding their compatibility, loading, storage, and handling characteristics.” Carriers are required to maintain records of satisfactory completion of initial and recurrent training given to crewmembers and ground personnel who perform assigned duties and responsibilities for the handling and carriage of dangerous goods. In recognition of international requirements, the regulations also provide that carriers operating in foreign countries, where loading and unloading must be done by foreign nationals, may use personnel who have not had the FAA-required training as long as they are “supervised by a person qualified ... to supervise the loading, offloading and handling of dangerous materials..”

Advisory Circular (“AC”) 121-21B (1984), Information Guide for Training Programs and Manual Requirements in the Air Transportation of Hazardous Materials, provides detailed guidance on manual content and training requirements for both will-carry and will-not-carry operators. It identifies certain job classifications as having duties in the acceptance, handling and carriage of hazardous materials, while specifying that others who actually have such responsibilities are covered: “cargo receiving clerk/cargo dock supervisor, cargo load planner/weight and balance clerk, aircraft loader/forklift operator, counter agent (if swift small package service is offered), the pilot-in-command, flight crewmembers, and other personnel assigned specific duties and responsibilities in the acceptance, handling, storage, loading and unloading of hazardous materials.” It provides a list of ten training content segments, with

reference to the relevant sections in both 49 CFR and the ICAO Technical Instructions, denoting four that are applicable to will-not-carry carriers.

### 3. The ICAO Technical Instructions

Many carriers look to the ICAO Technical Instructions as a guide for their hazmat practices, including training. The carriers believe that the ICAO standards are the best common reference point to facilitate the uniform, seamless handling of hazmat in international air transport.

ICAO is a United Nations organization charged under the Chicago Convention on International Civil Aviation with, among other things, establishing technical standards and recommended practices for international civil aviation. National governments may adopt the ICAO standards through domestic legislation and regulation. The U.S. has done so pursuant to 49 CFR §171.11, allowing the offer and acceptance of shipments prepared in accordance with the ICAO Technical Instructions.

ICAO maintains standards concerning the international transportation of dangerous goods. The broad principles on that subject are set forth in Annex 18 to the Convention. Every two years, ICAO issues a set of Technical Instructions for the Safe Transport of Dangerous Goods by Air, which amplify the principles by providing detailed instructions concerning the packaging, shipping and handling of dangerous goods. The Technical Instructions are continually updated by a body of experts, the ICAO Dangerous Goods Panel.

The Technical Instructions, Part 1, Chapter 4, set forth requirements for training concerning the regulations applicable to dangerous goods. They recognize that the level of training should be tailored to the nature of the job, providing:

#### 1;4.2 Training Curricula

1;4.2.1 Personnel must receive training in the requirements *commensurate with their responsibilities*. Such training must include:

- a) general familiarization training – which must be aimed at providing familiarity with the general provisions;
- b) function-specific training – which must provide detailed training in the requirements applicable to the function for which that person is responsible; and
- c) safety training – which must cover the hazards presented by dangerous goods, safe handling and emergency response procedures

(emphasis added).

The Technical Instructions also address content relevant to various classes of personnel, depending on their involvement with hazmat. They set forth a table showing 14 sample training content segments, and indicating which segments may be appropriate for each of nine categories of personnel, including both shipper personnel and carrier employees. A copy of the table is attached as Exhibit A.<sup>10</sup> The training content is tailored to job responsibilities. The only type of personnel to receive all 14 segments is operators' dangerous goods acceptance staff (and agents performing that function); all nine personnel categories receive four basic segments – general philosophy, labeling and marking, provisions for passengers and crew, and emergency procedures. For other personnel categories, the applicable segments are tailored to the job

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<sup>10</sup> The table in Appendix N follows the structural format of the ICAO table, but the content of the Appendix N “modules” and its list of employee groups differ markedly from the ICAO model.

functions (e.g., flight crew members and load planners do not need the segments on shipper requirements, classification, general packing requirements, packing instructions, transport documentation and acceptance procedures). The table is accompanied by a note encouraging operators to tailor training content further to fit the job functions of particular personnel.<sup>11</sup>

## **B. Carrier Practice Under the Current Regulations**

ATA member carriers each have highly individualized, FAA-approved training programs in compliance with the HMRS, tailored to meet the needs of their particular business structure. Business practices and philosophies, including assignment of hazmat responsibilities, differ significantly, even among similar carriers. Carriers' hazmat training programs differ correspondingly.

Carriers that accept hazmat all treat a broad range of employees as "hazmat employees," and train them at varying levels commensurate with their job responsibilities. It is possible to generalize to some degree, in the sense that all carriers have certain employee classifications to which they provide the highest level of hazmat training, which is approximately 32 to 40 hours of initial classroom instruction with annual recurrent training. These classifications generally include hazmat acceptance agents<sup>12</sup> and maintenance stores personnel who prepare aircraft components for COMAT shipment, but carriers also provide that level of instruction to a variety of other classifications or individuals whose job responsibilities warrant it. All carriers also provide function-specific training to other groups, including flight crews, ramp personnel and customer service agents. This training targets the hazmat issues that the employees in each job must perform or might predictably encounter, and can range up to several hours of initial self-paced or computer-based training ("CBT") with annual recurrent sessions. Most carriers organize their business so that certain classifications with no assigned or predictable hazmat responsibilities do not receive HMR training (though they do receive OSHA and other applicable instruction).

ATA's will-not-carry members also have FAA-approved training programs that provide for HMR instruction. Indeed, even though they do not transport hazmat, they provide recognition training to acceptance employees to enable them to recognize and refuse hazmat if it is offered to their carrier.

## **C. The Proposed Regulations**

As noted, the proposed regulations would abandon the concept of training commensurate with the employee's work. Indeed, they would deem the nature of the employee's job "irrelevant" (68 FR at 24814). Instead, they would require carriers, whether will-carry or will-not-carry, to train every employee in their aviation operations, as well as "supervisors" up to an unspecified rank. For most employees, the content of the training would be as comprehensive as that currently provided to hazmat acceptance agents. The proposals would add a new, extremely problematic, requirement that carriers provide training in their procedures to employees of repair stations and other contractors with which the carriers do business, whether or not the contractors actually handle hazmat.

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<sup>11</sup> "Note -- Depending on the responsibilities of the person, the aspects of training to be covered may vary from those shown in the table. For example, it may be more appropriate for a packer to cover the aspects with which a shipper should be familiar; if an operator carries only cargo, those aspects relating to passengers may be omitted from staff and flight crew training."

<sup>12</sup> Carriers that opt to be more selective in the hazard classes they accept are able to deliver appropriately focused training and consume less training time for their acceptance staff.

## **1. The Larger Population of Employees Required to be Trained**

Proposed section 121.135(b)(23) would expand the training requirements far beyond persons now deemed “hazmat employees.” Instead of requiring training of employees whose responsibilities include handling of hazmat, the proposal would require training of anyone “performing or supervising” the following “transportation related functions” (“TRF”) concerning “items for transport on an aircraft”: “Acceptance, Rejection, Handling, Storage incidental to transport, Packaging of company material, Loading, Unloading or Carriage.” The term “item, which is not separately defined ” could denote literally any luggage, package or other object that a passenger, shipper or the carrier itself may offer for air transport, whether potentially hazardous or not.

The ATA carriers share the view (absent clarification from FAA to the contrary) that the TRF definition would extend training requirements to all employees in their operations. Thus, carriers would be required to provide the extensive training now given to hazmat acceptance and maintenance stores employees to tens of thousands of employees whose assigned or potential hazmat responsibilities are more limited, and tens of thousands who have no assigned or potential hazmat responsibilities.

Will-not-carry passenger carriers, which have made the business decision not to transport dangerous goods or undertake the responsibilities necessary to do so, are not treated differently with respect to the requirement to train any employee who performs a TRF concerning any “item” offered for transport. Thus, all of their employees are covered by the training requirements. Moreover, as discussed below, the content of the training differs relatively little from that required for will-carry carriers.

Integrated cargo carriers like UPS and FedEx Express are concerned that the proposals are drafted so broadly that, literally interpreted, they could require training of drivers in the carriers’ ground operations. Their drivers’ training, while long subject to the HMRs, has not been covered under 14 CFR §121.433a and may well be outside the jurisdiction of the FAA. If the FAA intends the proposals to extend to those drivers, the costs of the additional training time would be enormous, with no commensurate safety benefit. Moreover, such coverage could conflict with the jurisdiction of other federal agencies, and it would be problematic if FAA approval were required for a small portion of an otherwise extensive training process used to qualify drivers for their duties on-road.

## **2. The Excessive and Unfocused Content of Training**

By contrast to the HMRs and the ICAO training content, Appendix N does not rationally relate the extent of training to the nature of employees’ jobs. It sets forth two tables, one for will-carry carriers and another for will-not-carry carriers, specifying which of the 13 content modules are required for six employee categories. It defines those employee categories so broadly as to group employees who clearly require the full extent of hazmat training, such as hazmat acceptance agents, with others who have limited or no hazmat responsibilities. Thus, for many employees in each category, many of the required modules have no relation to their duties. Unlike the training content table of the ICAO Technical Instructions, Appendix N makes no allowance for carriers to tailor training content to a specific employee’s responsibilities.

The ATA carriers have attempted hypothetically to apply the Appendix N categories and content requirements to their own operations, and they envision a multitude of complications.

The range of covered carriers is obviously diverse, comprising passenger and cargo carriers of varying sizes and individualized business specialties. Each of them serves locations of varying sizes and employee complements, and employees in the same nominal job classification may have different duties depending upon carrier and/or location. For example, a mechanic at one carrier and/or location might have extensive or specialized hazmat responsibilities that necessitate focused training, and at another carrier/location have few or no such responsibilities. Currently, each carrier carefully designs its hazmat training program to provide employees the knowledge that they need to perform safely in the context of the carrier's particular operation. No two carriers' programs are exactly alike. Compliance with Appendix N, with all employees in each broad category receiving identical training, would not only result in counter-productive overtraining of thousands of employees, but would greatly complicate the carriers' individual business planning.

Moreover, there are several aspects of Appendix N that simply do not make sense. Some types of employees (e.g., flight attendants, ticket counter agents) fall under more than one category. The modules that would be required for some of those categories differ. Appendix N also would not require some training that many carriers currently provide, such as training of ramp agents to perform pilot notifications regarding hazmat. The carriers cannot determine what, if any, employees would be covered by one of the categories.

Attached as Exhibit B is a more detailed explanation of issues that the carriers foresee under Appendix N. Within each of the six employee categories, we set forth below the operational groups that the ATA carriers understand them to cover, and provide examples illustrating the carriers' concerns with the proposed training content.

### **3. A Potential Solution for Training Content**

As should be apparent from the description of the carriers' practices in Exhibit B, a "one-size-fits-all" hazmat training curriculum will not work. Any new training rules must allow for the fact that every carrier organizes its business differently, and should not intrude unnecessarily on the carriers' business judgment.

The FAA could greatly alleviate the unnecessary burden on carriers by specifically authorizing them, as the ICAO Technical Instructions provide, to tailor training content for each employee group, making it commensurate with job duties of the specific employees in question. The ICAO Technical Instructions are a reasonable starting point for that assessment. This allows carriers to plan in accordance with their own business structures. To the extent that a carrier's plans differ from the ICAO format, that issue can be discussed with its POI during the approval process.

Carriers also would need to be confident that POIs across all regions will make appropriately consistent judgments in validating carriers' training programs. Only with this assurance can the carriers avoid the risk of a last-minute disapproval in the face of a deadline. One benefit of an ARC would be to allow the carriers and FAA to explore with greater refinement what level of training is commensurate with the job duties of specific subgroups of the six specified employee categories. Any regulatory text must recognize the diversity of business models and incorporate flexibility for carriers to work in conjunction with their POIs in defining their training programs.

#### **4. The Impossible Timetable for Implementation**

If the proposals were adopted, the carriers could not possibly devise training programs and obtain POI approval within the short expiration window (15 months) that would be provided in the proposed SFAR No. 99. The carriers could be left without an approved training program, especially if the FAA intends for them to provide the required initial training to all affected employees within the 15 months.

The carriers are concerned that the POIs who must approve their programs may take differing and/or inconsistent views of what is required. Indeed, a literal reading of the proposals would give them little leeway to do otherwise, and they would predictably feel pressure to take stringent positions. A carrier could spend months devising a program it believes to be compliant, only to have it rejected as insufficient shortly before the deadline. Moreover, the POIs are operational experts who will themselves need to have training on how to evaluate a hazmat training program under any new rules. They will need to consult with others in the FAA as they adapt to the new rules, placing further time pressure on the carriers. Moreover, guidance on “constructive knowledge” is still pending, and that topic would be an important element of function-specific training for several types of employees.

#### **5. The Unworkable Requirements for “Supervisors”**

Just as the definition of TRF would bring every operational employee (and others) within the scope of the proposals, the definition of supervisor would sweep in hundreds of supervisory personnel whose responsibilities rarely if ever bring them in contact with hazmat. All levels of carrier management at an airport, as well as the corporate management and officers to whom they report, are responsible for supervising actions enumerated in proposed §121.801 concerning an “item” placed on an aircraft. Such broad applicability to supervisors without regard to their responsibilities regarding hazmat is unnecessary to ensure safety and an unreasonable burden on the carriers.

Furthermore, carrier operations would be stymied by the unprecedented requirements for “direct visual supervision” of new hires and workers at foreign locations, as provided in proposed §§121.803(a) and (f). To accomplish “visual” supervision of new hires and transfers in a large worksite like an airport would practically require a one-to-one supervisory ratio. With the new hire exception shortened from the current 90 days to 30 days for, effectively, all airport employees, the proposals would wreak havoc on carrier staffing practices. Similarly, at the carriers’ foreign hubs, where local law usually requires the employment of nationals, it is generally unnecessary for the trained person literally to stand and watch the foreign worker complete every task.

#### **6. The Unworkable Requirements for Repair Stations and Contractors**

The carriers understand why it is desirable to communicate with their repair stations regarding hazmat. It is certainly essential for a repair station to know whether its carrier customers are will-carry or will-not-carry operators. It is appropriate that repair stations be informed of their customers’ practices and procedures regarding hazmat, including COMAT parts and components. These substantive requirements concerning packaging, labeling, handling and related matters are based on the HMRs, and in practice may vary little among will-carry carriers. The repair stations are themselves independently subject to the HMRs, including the training requirements and any appropriate enforcement action, and are subject to FAA enforcement.

The proposals, however, would require repair station employees performing or supervising a TRF for a carrier to be trained under the *carrier's* approved training program. 68 FR at 24811. This is simply untenable. Since many large carriers use a number of repair stations, the number of employees they would have to train would expand dramatically, in addition to the extraordinary burden of training all of their own employees beyond levels commensurate with their hazmat responsibilities. The costs would be staggering, directly as well as indirectly, as the repair stations would likely be forced to seek to raise prices to compensate for the employee time devoted to the carrier's training. The requirement also would put carriers in the unacceptable position of enforcing training requirements, generally done in an employment setting, on persons over whom they have no employment authority. There is no policy justification for relieving repair station of their own training responsibilities and transferring that responsibility and expense to their customers.

A requirement to train repair station and contractor employees would lead to many complexities. A large carrier may use as many as 500 such entities. Many repair stations subcontract certain aspects of a job, such as an engine overhaul, to specialized subcontractors. The proposals would require the subcontractor's employees to undergo full carrier training. Some carriers are themselves repair stations certified under Part 145 and, in addition to contract work, take "drop-in" work from other carriers that experience unexpected maintenance problems away from their own facilities. Read literally, the proposals would preclude unplanned repair station work because the repair station could not have been trained under each carrier's program.

Furthermore, the proposals' notification requirements are impermissibly subjective. Carriers can and do take the objective steps of informing repair stations whether they carry hazmat and advising them of carrier procedures for HMR compliance. The carriers are concerned that the proposal purports to require them, subjectively, to ensure that the management of each station is "actually aware" of carrier status and procedures. Aside from the statement that the carrier must do more than write a letter, the proposals offer no guidance to the carriers about what they are expected to do. The carriers can control their own actions, but not the subjective "awareness" of third parties.

The proposals would also be burdensome as applied to the common practice of contracting ground handling at outlying stations. Carriers provide awareness training on their policies and practices to contractors, who are required to give their own employees training compliant with the HMRS. Carriers perform their own due diligence to ensure that their contractors have such a training program. These contractors do not necessarily assign the same individuals to a particular carrier's flights, and have relatively high turnover rates. Thus, carriers would continually have to undergo the significant expense of training contractor personnel at the extensive levels proposed.

## **7. Unworkable Supervision Requirements for International Locations**

In countries where local law requires the employment of foreign nationals, the proposals would require carriers to provide the extensive hazmat training to their employees and those of their contractors. In some foreign locations, carriers have no employees other than the station manager, and their codeshare partner or other contractor provides passenger and ground handling. Carrier employees and contractors in such locations already receive function-specific hazmat training; and contractor employees also receive that of their own employers, which closely follow the ICAO Technical Instructions. Current rules require "supervision" by a trained person of loading, offloading and handling of dangerous goods by persons who have not had the FAA-approved training.

The proposals would unreasonably narrow the exception for untrained employees working under supervision, and restrict the exception to loading and unloading. Thus, any other handling of hazmat would have to be done by someone who has had the extensive training, regardless of supervision. For loading and unloading, the trained person would have to provide “direct visual supervision.” In situations where there is more than one flight being worked, particularly at hubs, this is unworkable. There is no compromise of safety in continuing to allow the trained person to supervise by giving appropriate direction and follow-up, enabling him/her to handle more than one issue at once.

## 8. The Burdensome Training Format and Record-keeping Requirements

The proposals would require instructor-led training for all employees, for all or an unspecified part of the curriculum. It would require instructor-led reinstruction on test questions answered incorrectly. The proposals ignore the prevalence and effectiveness of the computer-based programs that all carriers employ to train on a number of subjects. When an employee gives an incorrect answer in this format, the program reviews the question and explains the rationale behind the right answer. The carriers request that the FAA recognize the strengths and benefits of computer based training methods.

Moreover, several aspects of the proposed recordkeeping requirements are at odds with existing regulatory requirements and the trend toward centralized data sources. The proposals require that records be kept at the current location of an employee, which would require constant and unnecessary movement of records as employees transfer among carrier locations. A centralized, computerized corporate record, accessible by field locations, provides adequate proof of compliance and has long been a standard business practice, accepted by the FAA.

Much of the additional record-keeping is unnecessary. There is no need for a certification by a “Director of Training;” there is no regulatory requirement to have such a position, and most carriers do not have one. Likewise, there is no reason to require an instructor’s or employee’s signature to confirm attendance at training. In this regard, the FAA is unjustifiably treating training records as the equivalent of maintenance signoffs.

## III. The FAA’s Economic Analysis is Flawed

### A. The FAA’s Carrier Training Cost Estimates are Unsound

The NPRM sets forth the results of a cost/benefit analysis that the FAA performed in accordance with Executive Order 12866. The FAA estimates that the proposals would cost the industry (Part 121 and 135 carriers and Part 145 repair stations) \$107.5 million, discounted to \$75.8 million, over a ten-year period (2002 – 2011). The NPRM breaks this calculation down as follows:

Training of carrier and repair station personnel	\$91,600,000	\$64,500,000 discounted
Recordkeeping	13,526,000	9,294,000 discounted
Repair station record submission, staff notification	878,000	612,000 discounted
Database upgrades	617,000	577,000 discounted
Manual revisions	321,000	300,000 discounted

68 FR at 24819.

The Draft Regulatory Impact Analysis (the “Analysis”)<sup>13</sup> provided in the docket reveals that the \$107.5 million cost estimate is based on fatally flawed assumptions and methodology. These comments will focus on the estimated training cost element of \$91,565,900 (rounded to \$91,600,000 in the NPRM)<sup>14</sup>, of which \$61,679,900 is deemed attributable to training costs at the “deficient” Part 121 and 135 carriers<sup>15</sup> (Analysis at 26, Table 9). These employee training costs are the element for which the carriers can most readily make their own comparisons, as set forth in Section III.B below. We also focus on the portion of those projected training costs that the Analysis identifies as attributable to Part 121 carriers, as opposed to Part 135 carriers. As outlined below, projected Part 121 carrier costs comprise only about a half of the \$61,679,900 total for projected carrier employee training, or \$32,740,395.

As its starting point for the Analysis, the FAA used the results of a superficial 1999 Special Emphasis Review survey covering hazmat training under the HMRs at Part 121 and Part 135 carriers. The FAA POIs were given 30 days to obtain answers from the carriers to a series of general yes/no questions about the content of their carriers’ programs and the employee groups to whom the carriers provided “training” of unspecified content. The POIs submitted responses covering only 61.3 percent of the 150 Part 121 carriers, and 43 percent of the 1,850 Part 135 carriers. In the recollection of various ATA carriers, the survey was very casual, with no indication that it was to serve as the foundation for a major rulemaking. The Analysis itself notes that the many shortcomings of the survey led to “dubious responses to a number of questions, particularly to Questions 13a – 13k, covering the training provided to various categories of personnel.”<sup>16</sup> See Analysis, Appendix A at 1. Nonetheless, the survey is used to project the entire cost impact of the proposals.

The Analysis reveals that the \$61,679,900 million training cost estimate for carrier employees is based on the incorrect assumption that additional training requirements would apply to only a small number of Part 121 carriers. No such limitation appears anywhere in the NPRM. According to the Analysis, 90 percent of Part 121 “will-not-carry” carriers, and 99 percent of Part 121 “will-carry” carriers, already meet the proposed standards. *Id.*, Appendix A at 2. As shown above, this assumption is also incorrect since the NPRM contains no such limitation of coverage.

The FAA therefore bases the training cost calculations in the Analysis on a small subset of the carriers that the proposals would actually affect. The calculations cover only ten unidentified Part 121 carriers that the Analysis deems “deficient” in training according to the 1999 survey, which are the only ones that the Analysis treats as “affected” by the proposals – three “will-carry” and seven “will-not-carry” carriers. *Id.* at 19, Table 5. The FAA does not provide a definition of “deficient” except to state, in the note to Table 5, that this characterization is based on carrier responses to survey Questions 11 – 25 (excluding Question 13). Those questions merely ask in general terms whether the carrier’s training program covers certain topics. ATA cannot determine whether any of its members are among the ten allegedly “deficient” Part 121 carriers to which the Analysis refers.

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<sup>13</sup> The Analysis was prepared by the FAA’s Office of Aviation Policy and Plans, Operations Regulatory Analysis Branch, and is dated December 1999 (revised April 2001).

<sup>14</sup> We do not concede that the other categories of cost projections are accurate, and will address them as appropriate.

<sup>15</sup> The remaining \$29,886,000 of the FAA’s \$91,600,000 training cost projection pertains to carrier training of Part 145 repair station employees. Analysis at 26, Table 9. We believe that this estimate is as severely understated as the projected training costs for carrier employees. The information needed to estimate such costs is not as readily available to the carriers as their internal costs. The carriers will supplement these comments as appropriate to reflect such data.

<sup>16</sup> More accurately, Question 13 only asked *whether* the carrier provided training to each personnel category.

Even with respect to the ten unidentified Part 121 carriers included in the \$61,679,900 training cost calculation, the Analysis relies upon the following unreasonable or unsupported assumptions:

- Though the NPRM does not propose specific training hours, the Analysis assumes that the “will-carry” curriculum could be taught in 30 hours of initial training and 8 hours of recurrent, and the “will-not-carry” curriculum would take 8 hours of initial and 4 hours of recurrent. It further assumes that the “deficiencies” at the ten “affected” Part 121 carriers could be cured by providing half that amount of training – 15 hours of initial training and 4 hours recurrent at “will-carry” carriers, 4 hours of additional initial training and 2 hours of recurrent at “will-not-carry” carriers.<sup>17</sup> We estimate that the proposed training would take a much higher number of hours.
- The Analysis assumes hourly employee wage rates, including benefits, ranging from \$23.87 to \$30.72 at Part 121 and large Part 135 carriers.<sup>18</sup> It does not specify the job classifications included, but hourly rates for most classifications at ATA member carriers, particularly if benefits are included, are well above the assumed levels. In particular, the pay of ATA members’ pilots, who would be required under Appendix N to receive all 13 modules of training, averages *several hundred* dollars per hour.
- At the ten “affected” Part 121 carriers, the calculation is based on an “Average # of Impacted Employees per Firm,” derived from 1997 Form 41 statistics for 37 unidentified airlines and “FAA employee data.” Analysis at 20, Table 6 and notes. The Analysis does not explain how FAA determined what subset of each carrier’s employees were “impacted.” The calculations are based on 3,070 “impacted” employees at each of the three large Part 121 carriers, and 230 “impacted” employees at each of the seven small Part 121 carriers. At any ATA carrier, either number would be a small fraction of the employees that would be covered under the Appendix N categories.

The Analysis proceeds to use these factors, which bear no relation to the literal terms of the proposals, to make cost estimates. For the ten allegedly “deficient” Part 121 carriers, it calculates the additional initial training by multiplying the half-of-normal initial training hours deemed necessary for remedial purposes (15 for “will-carry,” 4 for “will-not-carry”), times the “average number of impacted employees” at each carrier, times an hourly training cost of \$36.65.<sup>19</sup> For the ten Part 121 carriers, this formula yields additional initial training costs of \$3,009,332, out of a total of \$8,893,121 for all “deficient” carriers (including Part 135). Analysis at 20, Table 6.

Using the same flawed assumptions, the Analysis further proceeds to extrapolate the cost of ten years’ training, again only for the same ten “deficient” Part 121 carriers.<sup>20</sup> It concludes that the three “will-carry” carriers would spend a total of \$17,709,588<sup>21</sup> and the seven “will-not-carry” carriers a total of \$15,030,807<sup>22</sup>. Thus, projected additional costs for

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<sup>17</sup> It is unclear how recurrent training could be relevant in such a remedial context.

<sup>18</sup> These rates come from the 1Q 1999 Airline Cost Index. Analysis at 20, Table 6, notes.

<sup>19</sup> This hourly rate incorporates a trainer cost assumption of \$5.46 per hour, based on a survey of third-party training schools for A&P mechanics. Most ATA carriers use their own training departments, and their internal costs would be significantly higher than this assumption.

<sup>20</sup> The calculations inexplicably make two assumptions that cause the training cost projections to be understated. They continue to use 15/4 hours for “will-carry” and 4/2 for “will-not-carry” carriers, despite the statement that these were half the anticipated number of hours to remedy “deficiencies” at the ten carriers. They also address only initial training and omit all mention of recurrent training. Analysis at 21 – 22, Tables 7 and 7A.

<sup>21</sup> This is based on a total of 3,530 “impacted employees,” 3,070 from 1 large Part 121 carrier and 460 from 2 small Part 121 carriers (Table 6).

<sup>22</sup> This is based on a total of 7,290 “impacted employees,” 6,140 from 2 large Part 121 carriers and 1,150 from 5 small Part 121 carriers (Table 6).

the ten Part 121 carriers total \$32,740,395 (undiscounted), or approximately half of the total projected carrier training costs. Analysis at 21-22, Tables 7 and 7A. This is the portion of the FAA's estimate that the ATA carriers have used for purposes of comparison.

## **B. Actual Carrier Costs Would Greatly Exceed FAA Estimates**

The carriers have concluded that the cost of complying with the proposals would exceed the FAA's estimate many times over. That conclusion is hardly surprising, since the Analysis inexplicably assumes training for only about 11,000 Part 121 employees, at unrealistically low hourly rates and training durations. The Analysis bears no relation to what would be required if the proposals were adopted as written.

As noted, the ATA carriers are compiling their own costs of employee training using conservative assumptions, for direct comparison against the portion of the FAA cost estimate that pertains to employee training at Part 121 carriers, \$32,740,395. Although most carriers are still in the process of compiling their costs, we set forth the conclusions of two representative carriers (a large passenger carrier and a cargo carrier) in Exhibit C. We will supplement these comments when all member carriers have completed their calculations.

For these two carriers alone, the combined additional training costs for ten years would total \$781,027,775 (discounted), or almost 24 times the FAA's estimate for *all* Part 121 carriers. The carriers calculated the additional costs that the proposals would require by using their actual 2003 training costs as a baseline, projecting how much more they would spend annually under the proposals for ten years, and totaling the differences for that period.

The lack of guidance on module content has made it difficult for the carriers to estimate the number of training hours required and the resulting costs. The carriers have used the following assumptions to calculate projected employee training costs under the proposals over ten years:

- All itemized subject areas of each module would be provided to every employee in the categories for which that module is indicated, regardless of whether the employees' duties include handling hazmat.
- The scope of training for all employees in a category must be the same. That is, if a module is required for cargo agents (which includes the current hazmat acceptance agents), baggage loaders and pilots, the training must be at the same level of detail for all these categories.
- Where the proposal places employee classifications in more than one category (ticket agents, flight attendants), the category requiring the highest number of modules is used.
- The content of all 13 modules is equivalent to what carriers now provide to their most highly trained hazmat employees (e.g., hazmat acceptance agents, stores employees). Therefore, carriers assume they would have to provide the same duration of initial training currently given such employees to all employees in categories required to receive all 13 modules. For the two carriers whose calculations are set forth in Exhibit C, the number of assumed training hours ranges between 20 and 40.
- Carriers have made their own judgments as to how long it will take for initial training in fewer than 13 modules and for recurrent training, but at a uniform content level for each required module.
- Wages and number of employees are frozen at 2003 levels.

Carriers' internal accounting methods for training costs differ, but the hourly rates used in the calculations exclude the following substantial items:

- Trainer costs, including the cost of hiring hundreds of additional trainers to accomplish the level of training required.
- Cost of materials, manuals and course development.
- Travel and accommodation costs.
- Pay (often at overtime) of employees to backfill for those in training.
- Management training.
- In some cases, employee benefit costs.

The carriers realize that the numbers they reach are vastly greater than projected by the FAA, but they have no choice except to read the proposals as written. Carriers have made every effort to use realistic, conservative assumptions to avoid overstatement. The FAA's belief that the proposals should not require significant change in the practices of most Part 121 carriers appears to stem from its acceptance of the Analysis, which cannot withstand scrutiny. ATA and the carriers urge the FAA to reconsider the proposals from a realistic economic point of view.

### **C. The FAA Must Comply With the Unfunded Mandates Reform Act**

The proposals in their current form would impose annual costs on the private sector far exceeding \$100 million. If the FAA wishes to proceed with them, it must therefore prepare a "statement to accompany significant regulatory action" as required by the Unfunded Mandate Reform Act. The statement must include, among other things:

- A qualitative and quantitative assessment of the costs and benefits of the mandate, as well as the effect of the mandate on safety. Any such assessment would reveal the true costs of compliance, as well as the fact that the proposals would not contribute to safety despite their costs.
- An estimate of future compliance costs and their impact on the affected industry. Few industries have ever been beset with the economic travails currently faced by the airlines. As the carriers and ATA have pointed out in many contexts, these troubles are exacerbated by taxes, security costs and other mandates of federal law and regulation. The FAA could present no justification for a regulation that would impose such extreme costs for so little, or even negative, benefit.
- An assessment of the effects of the regulation on the national economy. Such an assessment would show an enormous burden on an already fragile sector.

Before issuing a final rule, the FAA would also need to identify and consider a reasonable number of regulatory alternatives, selecting the least costly, most cost-efficient or least burdensome alternative that achieves the purpose of the rule. We submit that this balancing of alternatives can be accomplished through the collaborative process of an ARC.

#### **IV. Conclusion and Recommendations**

Based on these comments, ATA and its member carriers urge the FAA to withdraw the current proposals, and convene an ARC in which all issues relating to the safe handling of hazmat in air transport can be considered using valid data and reasonable assumptions. We encourage the FAA to take the lead in establishing a collaborative effort among all governmental agencies that are involved in issues concerning air transportation of hazmat, with the objective of addressing hazmat issues comprehensively. Any such effort would include a concerted campaign to stop hazmat violations at their source, through better educated shippers and airline passengers. ATA and its member carriers would be pleased to participate in such an undertaking.

Respectfully submitted,

AIR TRANSPORT ASSOCIATION OF AMERICA, INC.

By:

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Betty Leach Hawkins  
Assistant General Counsel

The successful application of regulations concerning the transport of dangerous goods and the achievement of their objectives are greatly dependent on the appreciation by all individuals concerned of the risks involved and on a detailed understanding of the regulations. This can only be achieved by properly planned and maintained initial and recurrent training programmes for all persons concerned in the transport of dangerous goods.

Chapter 4  
TRAINING

Parts of this Chapter are affected by State Variations CA 18, HK 1, OM 2, OM 3;  
see Table A-1

4.1 ESTABLISHMENT OF  
TRAINING PROGRAMMES

4.1.1 Initial and recurrent dangerous goods training programmes must be established and maintained by or on behalf of:

- a) shippers of dangerous goods, including packers and shippers' agents;
- b) operators;
- c) agencies which perform, on behalf of the operator, the act of accepting, handling, loading, unloading, transferring or other processing of cargo;
- d) agencies located at an aerodrome which perform, on behalf of the operator, the act of processing passengers;
- e) agencies not located at an aerodrome which perform, on behalf of the operator, the act of checking in passengers;
- f) agencies other than operators involved in processing cargo; and
- g) agencies engaged in the security screening of passengers and their baggage.

4.1.2 Dangerous goods training programmes required by 4.1.1 b) must be subjected to review and approval by the appropriate authority of the State of the Operator. Dangerous goods training programmes required by other than 4.1.1 b) should be subjected to review and approval as determined by the appropriate national authority.

4.2 TRAINING CURRICULA

4.2.1 Personnel must receive training in the requirements commensurate with their responsibilities. Such training must include:

- a) general familiarization training — which must be aimed at providing familiarity with the general provisions;

- b) function-specific training — which must provide detailed training in the requirements applicable to the function for which that person is responsible; and
- c) safety training — which must cover the hazards presented by dangerous goods, safe handling and emergency response procedures.

4.2.2 Training must be provided or verified upon the employment of a person in a position involving the transport of dangerous goods by air. Recurrent training must take place within 24 months of previous training to ensure knowledge is current.

4.2.3 A test to verify understanding must be undertaken following training and a certificate issued confirming that the test has been completed satisfactorily.

4.2.4 A record of training must be maintained which must include:

- a) the individual's name;
- ≠ b) the most recent training completion date;
- c) a description, copy or reference to training materials used to meet the training requirements;
- d) the name and address of the organization providing the training; and
- e) a copy of the certification issued when the individual was trained, which shows that a test has been completed satisfactorily.

The records of training must be made available upon request to the appropriate national authority.

4.2.5 The subject matter relating to dangerous goods transport with which various categories of personnel should be familiar is indicated in Table 1-4.

Aspects of transport of dangerous goods by air with which they should be familiar, as a minimum	Category of personnel — see key below								
	1	2	3	4	5	6	7	8	9
General philosophy	x	x	x	x	x	x	x	x	x
Limitations	x		x		x	x	x	x	x
General requirements for shippers	x		x			x			
Classification	x	x	x			x			
List of dangerous goods	x	x	x			x	x		
General packing requirements	x	x	x			x			
Packing instructions	x	x	x			x			
Labelling and marking	x	x	x	x	x	x	x	x	x
Dangerous goods transport document and other relevant documentation	x		x			x			x
Acceptance procedures			x						x
Storage and loading procedures			x	x			x		x
Pilots' notification			x	x			x		
Provisions for passengers and crew	x	x	x	x	x	x	x	x	x
Emergency procedures	x	x	x	x	x	x	x	x	x

KEY

- 1 — Shippers and shippers' agents
- 2 — Packers
- 3 — Dangerous goods acceptance staff of operators and agencies acting on behalf of operators
- 4 — Staff of operators and agencies acting on behalf of operators engaged in the ground handling, storage and loading of cargo and baggage
- 5 — Passenger-handling staff and security staff who deal with the screening of passengers and their baggage
- 6 — Staff of agencies other than operators involved in processing cargo
- 7 — Flight crew members and load planners
- 8 — Crew members (other than flight crew members)
- 9 — Cargo acceptance staff (other than dangerous goods acceptance staff) of operators and agencies acting on behalf of operators

*Note.— Depending on the responsibilities of the person, the aspects of training to be covered may vary from those shown in the table. For example, it may be more appropriate for a packer to cover the aspects with which a shipper should be familiar; if an operator carries only cargo, those aspects relating to passengers may be omitted from staff and flight crew training.*

## **Exhibit B**

### **1 – “Persons who accept cargo, packages or passenger baggage.”**

Will-carry: All 13 modules

Will-not-carry: 9 modules (general overview, hidden dangerous goods, company materials, documentation, marking and labeling, identification, safety and reporting, passenger/air carrier exceptions/US mail, certificate holder policies and procedures)

- Hazmat acceptance agents -- All will-carry carriers now provide the most extensive hazmat training to hazmat acceptance agents; will-not-carry carriers by definition do not employ hazmat acceptance agents. ICAO treats hazmat acceptance agents as a separate category (3 – “Dangerous goods staff of operators and agencies acting on behalf of operators.”); they are the *only* ICAO category for which all 14 ICAO content segments are recommended. The ATA carriers agree that full hazmat training, encompassing in-depth content under all 13 of the proposed modules, is appropriate. This would not require any change in current carrier practice.
- Cargo acceptance staff who are not assigned to accept dangerous goods – ATA carriers consider these staff to be HMR hazmat employees, and provide them the appropriate function-specific training, including recognition training that enables them to recognize potential hazmat issues that should be referred to a specialist. ICAO treats non-hazmat acceptance staff as a separate category (9 – Cargo acceptance staff (other than dangerous goods acceptance staff) ...), and provides more abbreviated training content than for hazmat acceptance agents. Under the proposals, the carriers would have to train these agents to the same level as hazmat acceptance agents. Non-hazmat acceptance staff are far more numerous than hazmat acceptance staff, and increasing their training content would entail considerable additional training time and associated cost, but would not improve hazmat safety.
- Ticket counter agents, skycaps, flight attendants, ramp agents and others who may “accept baggage” – In a passenger carrier’s operation, ticket counter agents or skycaps accept baggage on check-in; others often do so under certain circumstances, such as flight attendants and/or ramp agents when overhead bins are full. The carriers provide each of the groups function-specific training relevant to their jobs, including the responsibility to accept baggage. By including these groups in Category 1, FAA is saying that they must receive the same training as hazmat acceptance agents under all 13 models, yet each of the groups is included in one or more other categories, for which fewer and different modules are required. This contradiction is a good example of why the proposals are unworkable.

### **2 – “Persons working in supply, storage, or warehouse facilities, or involved in shipping of aircraft parts, supplies or company material.”**

Will-carry and will-not-carry: All 13 modules

- Maintenance stores personnel who package and ship hazmat parts – Carriers provide extensive levels of hazmat training to these employees, who package aircraft parts for COMAT shipment, or for placement on another carrier or ground transport in the case of will-not-carry carriers. They are equivalent to shippers under ICAO terminology. All carriers have a core of such employees in major maintenance hubs where parts shipment is commonplace; in smaller stores locations, all stores employees may have this training. The carriers agree that a very high level of training is necessary for these employees, and the proposals would not require a change in current practice for many carriers.

- Maintenance stores personnel who do not package or ship hazmat parts – In large stores locations, many carriers employ persons who are not assigned to handle hazmat. These vary depending on carrier business practice, but may include “parts pickers” who handle non-hazmat parts that may simply be moved to other locations within the same facility, and supply clerks who handle blankets and paper items to be placed on aircraft. The carriers currently provide appropriate function-specific training to enable these employees to recognize a hazmat issue that needs to be referred to a fully hazmat-trained employee. Under the proposals, these employees would have to receive the same extensive hazmat training, creating considerable burden and expense for no improvement in hazmat safety.
- Mechanics – Carriers employ tens of thousands of mechanics, many of whom have specialized skills in engines, components, avionics or other specialties. Many are employed in heavy maintenance bases, where aircraft are out of service for scheduled maintenance; many others are employed in line operations at hubs and numerous outlying stations, where they service aircraft in active operation. Carrier maintenance operations are organized differently depending on carrier business structure, and hazmat training practices vary accordingly. Many carriers provide basic familiarization training to mechanics in large operations where stores specialists are assigned to hazmat responsibilities, or in specialized shops like avionics and components where the work does not involve hazmat. Some carriers, on the principle that specialization brings expertise, give mechanics who work on particular parts extensive hazmat training on the handling, packaging, labeling and handling of that part, even if the mechanic is in a stores location. In outlying stations with no stores support, carriers typically provide much more extensive training to their line mechanics, with content tailored to the parts shipment and other hazmat issues that their work entails. The proposals would require every one of the tens of thousands of mechanics, who now receive hazmat training meticulously tailored to their jobs, to receive the same training given to stores personnel with direct hazmat responsibilities. This would generate enormous burden and expense, with no improvement to safety.
- Others “working in supply, storage or warehouse facilities, or involved in shipping of aircraft parts, supplies or company materials” – By tying training requirements to a geographical work location, this category could extend to a wide variety of employees who may have no hazmat responsibilities, such as employees in technical warehouses containing only computers and related parts, ticket stock clerks and others – even janitors and receptionists. Under the proposals, these employees would have to receive the same extensive training as hazmat stores employees. The nebulous phrase “involved in” could encompass a similarly broad range of employees with no hazmat responsibilities, such as logistics support staff. Furthermore, many “supplies” and “company materials” are non-hazmat. Under the proposals, employees “involved in” shipping these materials would have to receive the same extensive training as hazmat stores employees. This is an illogical result and must be reconsidered.

### **3 – Persons who handle, store, and load or unload packages, passenger baggage or cargo**

Will-carry: 11 modules (general overview, hidden dangerous goods, COMAT, documentation, acceptance and handling, marking and labeling, classification, identification, safety and reporting, passenger/air carrier exceptions/US mail, certificate holder procedures and policies)

Will-not-carry: 9 modules (same as above, except for acceptance and handling and classification)

- Ramp employees – Carriers all give employees who load and unload aircraft function-specific training to enable them to carry out hazmat requirements relevant to their jobs. The training generally encompasses the topics covered by the required modules, but is not the extensive content under most of them that hazmat acceptance agents receive. In small stations where passenger service and ramp agents are cross-utilized, they receive function-specific training for both jobs. Some carriers assign ramp employees responsibilities for notifying the pilot in command, which is an ICAO-recommended subject but not among the modules required by the proposals. Requiring full hazmat acceptance training for all ramp employees would impose great burden and expense with no safety improvement.
- Persons who “handle and store” packages, baggage and cargo – This broad phrase would encompass various small groups at many carriers, including employees at on or off-airport buildings who load containers. At carriers where such containerized loads may contain hazmat, training is already covered by the carrier’s FAA-approved program. Where these containerized materials are not hazmat items that would require specific packaging under the HMRs, the proposals are excessive. The carriers provide these employees with function-specific awareness training. The proposals would require that they all receive the extensive training provided to hazmat acceptance employees, which would entail significant burden and expense that would produce no safety improvement.

#### **4 – Persons engaged in passenger and baggage check-in services (e.g., skycaps, ticket counter agents, flight attendants, etc.)**

Will-carry: 10 modules (general overview, hidden dangerous goods, COMAT, documentation, acceptance and handling, marking and labeling, pilot notification, safety and reporting, passenger/air carrier exceptions/US mail, certificate holder policies and procedures)

Will-not-carry: 8 modules (same as above, except for acceptance and handling and pilot notification)

- This entire category is redundant, since all employee categories listed accept baggage and would be covered under category 1. The carriers agree, as suggested by the limited number of modules compared to category 1, that these employees do not need to be trained to the level of hazmat acceptance agents. Given the conflict between this category and category 1, the carriers are unsure what the proposals would require them to do. As noted, the carriers all provide these groups with recognition training and function-specific training on relevant hazmat topics, such as spillable/non-spillable wheelchair batteries, dry ice, medical shipments and medical oxygen, all of which are identified as excepted from normal hazmat rules in 49 CFR. The carriers believe that this job-related training is appropriate to ensure safety.

#### **5 – Persons responsible for cargo during flight (including pilots, flight engineers, flight attendants, dispatchers)**

Will-carry: All 13 modules

Will-not-carry: 7 modules (general overview, hidden dangerous goods, company materials, documentation, safety and reporting, passenger/air carrier exceptions/US mail, certificate holder policies and procedures)

- Pilots – Carriers all provide their pilots with initial and recurrent awareness and function-specific training, covering topics such as recognition training on labels and

markings that pilots may see in their walk-arounds, loading, pilot notification and emergency procedures. Cargo carriers generally provide their pilots with more extensive hazmat training than passenger carriers. The proposals would require all carriers to provide pilots with the same extensive training provided to hazmat acceptance and stores personnel. Such training would include a level of detail on numerous hazmat issues that pilots will never need, e.g., packing, acceptance, documentation. Moreover, the cost of a full or near-full week's initial training, and ongoing recurrent training, at pilot pay would be staggering – literally impossible for any carrier to sustain even in stable economic times – but would not improve safety.

- Flight engineers – Carriers that employ flight engineers (a position required on relatively few aircraft) provide them awareness and function-specific training equivalent to that given to pilots. The proposals would likewise require carriers to provide them with extensive training on subjects they would not use.
- Flight attendants – This is the third category to cover flight attendants. See the comments regarding their training under categories 1 and 4 above.
- Dispatchers – The carriers do not understand why dispatchers would be included in any category unless the FAA is using that term to denote what ICAO calls “load planners,” which are grouped with flight crew members. At most carriers, dispatchers do not have load planning functions, but rather handle routing, timing and weather. To the extent that dispatchers have load planning functions, carriers provide them with function-specific training concentrating on such issues. The proposals would require all dispatchers, even those with no load planning functions, to receive the same training as hazmat acceptance agents and stores personnel. This terminology needs to be clarified, and the degree of training proposed even for load planners is unnecessary.

#### **6 – Flight crew members who do not perform any responsibility listed above**

Will-carry and will-not-carry: Six modules (general overview, hidden dangerous goods, marking and labeling, notice to pilot, certificate holder policies and procedures)

- The carriers cannot identify any employee group that would be covered by this category who are not already covered by the previous five categories.

## Exhibit C

Carrier 1						
		Total Annual Costs			Cost Increase	
		2003 Baseline	Proposed Program		Difference	Discounted Annual Difference
Year 1		\$6,866,516	\$102,124,096		\$95,257,580	\$89,025,776
Year 2		\$6,866,516	\$52,037,946		\$45,171,430	\$39,454,476
Year 3		\$6,866,516	\$52,037,946		\$45,171,430	\$36,873,342
Year 4		\$6,866,516	\$52,037,946		\$45,171,430	\$34,461,068
Year 5		\$6,866,516	\$52,037,946		\$45,171,430	\$32,206,605
Year 6		\$6,866,516	\$52,037,946		\$45,171,430	\$30,099,631
Year 7		\$6,866,516	\$52,037,946		\$45,171,430	\$28,130,496
Year 8		\$6,866,516	\$52,037,946		\$45,171,430	\$26,290,184
Year 9		\$6,866,516	\$52,037,946		\$45,171,430	\$24,570,265
Year 10		\$6,866,516	\$52,037,946		\$45,171,430	\$22,962,865
<b>10-Year Total</b>					<b>\$501,800,451</b>	<b>\$364,074,709</b>
Carrier 2						
		Total Annual Costs			Cost Increase	
		2003 Baseline	Proposed Program		Difference	Discounted Annual Difference
Year 1		\$8,614,456	\$188,431,296		\$179,816,840	\$168,053,121
Year 2		\$8,614,456	\$49,491,424		\$40,876,968	\$35,703,527
Year 3		\$8,614,456	\$49,491,424		\$40,876,968	\$33,367,782
Year 4		\$8,614,456	\$49,491,424		\$40,876,968	\$31,184,843
Year 5		\$8,614,456	\$49,491,424		\$40,876,968	\$29,144,713
Year 6		\$8,614,456	\$49,491,424		\$40,876,968	\$27,238,050
Year 7		\$8,614,456	\$49,491,424		\$40,876,968	\$25,456,121
Year 8		\$8,614,456	\$49,491,424		\$40,876,968	\$23,790,768
Year 9		\$8,614,456	\$49,491,424		\$40,876,968	\$22,234,362
Year 10		\$8,614,456	\$49,491,424		\$40,876,968	\$20,779,778
<b>10-Year Total</b>					<b>\$547,709,552</b>	<b>\$416,953,066</b>
<b>Discount rate:</b>		<b>7%</b>				

- All itemized subject areas of each module would be provided to every employee in the categories for which that module is indicated, regardless of whether the employees' duties include handling hazmat.
- The scope of training for all employees in a category would be the same. That is, if a module is required for cargo agents (which includes the current hazmat acceptance agents), baggage loaders and pilots, the training would be at the same level of detail for all these categories.
- Where the proposal places employee classifications in more than one category (ticket agents, flight attendants), the category requiring the highest number of modules is used.
- The content of all 13 modules is equivalent to what carriers now provide to their most highly trained hazmat employees (e.g., hazmat acceptance agents, stores employees). Therefore, carriers assume they would have to provide the same duration of initial training currently given such employees to all employees in categories required to receive all 13 modules. For the two carriers whose calculations are set forth above, the number of assumed training hours ranges between 20 and 40.
- Carriers have made their own judgments as to how long it will take for initial training in fewer than 13 modules and for recurrent training, but at a uniform content level for each required module.
- Wages and number of employees are frozen at 2003 levels.

Carriers' internal accounting methods for training costs differ, but the hourly rates used in the calculations exclude the following substantial items:

- Trainer costs, including the cost of hiring hundreds of additional trainers to accomplish the level of training required.
- Cost of materials, manuals and course development.
- Travel and accommodation costs.
- Pay (often at overtime) of employees to backfill for those in training.
- Management training.
- In some cases, employee benefit costs.